(5) The plan sponsor reasonably believes that the value per unit of the fund as so reflected has been determined in accordance with the procedures normally employed by the manager of the fund pursuant to the terms of the fund, and Federal and state law and regulations, as applicable.

(b) *Value.* The value of a unit of participation to which this section applies is the value per unit of the fund as reflected in the statement of account referred to in paragraph (a)(4) of this section.

§ 2676.24 Treasury bills.

The value of a Treasury bill is the face amount of the bill reduced by the average discount. The average discount is equal to the face amount multiplied by the average of the bid and asked discount percentage (expressed as a decimal fraction) for the bill on the valuation date, as published nationally in a general circulation daily newspaper, prorated for the number of days remaining to maturity.

§ 2676.25 Treasury notes, bonds, and Federal agency securities.

The value of a Treasury note, bond, or Federal agency security is the average of the bid and asked prices for the note, bond, or security on the valuation date, as published nationally in a general circulation daily newspaper.

§ 2676.26 Shares in open-end mutual funds.

The value of a share in an open-end mutual fund is the per-share net asset value (redemption value) of the fund on the valuation date, as published nationally in a general circulation daily newspaper.

§ 2676.27 Common and preferred stocks, warrants, and shares in closed-end mutual funds principally traded on certain major exchanges.

(a) *Applicability.* This section applies to common or preferred stocks, warrants, or shares in a closed-end mutual fund, if the plan sponsor reasonably believes that the greatest volume of trades of the security normally occurs on the New York Stock Exchange or the American Stock Exchange, and also reasonably believes that the closing sale price of the security as published nationally in a general circulation daily newspaper is the closing sale price of the security on the exchange as reported by the consolidated last sale reporting system established pursuant to Rule 11Aa3–1 promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934.

(b) *Value.* The value of a security to which this section applies is the closing sale price on the valuation date, as published nationally in a general circulation daily newspaper.

§ 2676.28 Common and preferred stocks, warrants, and shares in closed-end mutual funds principally traded on other exchanges.

(a) *Applicability.* This section applies to common or preferred stocks, warrants, or shares in a closed-end mutual fund, if the plan sponsor reasonably believes that the greatest volume of trades of the security normally occurs on a national securities exchange registered with the Securities and Exchange Commission under section 6 of the Securities Exchange Act of 1934, other than the New York Stock Exchange or the American Stock Exchange.

(b) *Value.* The value of a security to which this section applies is the closing sale price of the security on that exchange of the valuation date, as published nationally in a general circulation daily newspaper.

§ 2676.29 Common and preferred stocks, warrants, and shares in closed-end mutual funds principally traded over-the-counter.

(a) *Applicability.* This section applies to common or preferred stocks, warrants, or shares in a closed-end mutual fund, if the plan sponsor reasonably believes that the greatest volume of trades of the security normally occurs otherwise than on a national securities exchange, and also reasonably believes that the end-of-the-day bid and asked prices of the security as published nationally in a general circulation daily newspaper are those quoted on, and made available for publication by, the automated quotations system sponsored by the National Association of Securities Dealers, Inc. (a national securities association registered with the Securities and Exchange Commission under section 15A of the Securities Exchange Act of 1934).

(b) *Value.* The value of a security to which this section applies is the average of the end-of-the-day bid and asked prices for the valuation date, as published nationally in a general circulation daily newspaper.

§ 2676.30 State and municipal obligations.

The value of a state or municipal obligation is the average of the bid and asked prices for the obligation for the valuation date, as published nationally in a general circulation daily newspaper.

§ 2676.31 Outstanding claims for withdrawal liability.

(a) *Value of claim.* The plan sponsor shall value an outstanding claim for withdrawal liability owed by an employer described in paragraph (b) of this section in accordance with paragraphs (a)(1) and (a)(2) of this section:

(1) If the schedule of withdrawal liability payments provides for one or more series of equal payments, the plan sponsor shall value each series of payments as an annuity certain under § 2676.13(c)(1) or (d)(1).

(2) If the schedule of withdrawal liability payments provides for one or more payments that are not part of a series of equal payments as described in paragraph (a)(1) of this section, the plan sponsor shall value each such unequal payment as a lump-sum payment under § 2676.13(b)(1).

(b) *Employers neither liquidated nor in insolvency proceedings.* The plan sponsor shall value an outstanding claim for withdrawal liability under paragraph (a) of this section if, as of the valuation date—

(1) The employer has not been completely liquidated or dissolved; and

(2) The employer is not the subject of any case or proceeding under Title 11, United States Code, or any case or proceeding under similar provisions of state insolvency laws; except that the claim for withdrawal liability of an employer that is the subject of a proceeding described in this paragraph (b)(2) shall be valued under paragraph (a) of this section if the plan sponsor determines that the employer is reasonably expected to be able to pay its withdrawal liability in full and on time.

(c) *Claims against other employers.* The plan sponsor shall value at zero any outstanding claim for withdrawal liability owed by an employer that does not meet the conditions set forth in paragraph (b) of this section.

EFFECTIVE DATE: This part is effective April 24, 1986.

Issued in Washington, DC, on February 27, 1986.

William E. Brock,

Chairman, Board of Directors, Pension Benefit Guaranty Corporation.

Issued pursuant to a resolution of the Board of Directors approving, and authorizing its chairman to issue, this regulation.

Edward R. Mackiewicz,

Secretary, Board of Directors, Pension Benefit Guaranty Corporation.

[FR Doc. 86–6117 Filed 3–24–86; 8:45 am]

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PENSION BENEFIT GUARANTY CORPORATION

29 CFR Part 2619

Valuation of Plan Benefits in Non-Multiemployer Plans

AGENCY: Pension Benefit Guaranty Corporation.

ACTION: Proposed rule.

SUMMARY: This is a proposed amendment to the Pension Benefit Guaranty Corporation's regulation on Valuation of Plan Benefits in Non-Multiemployer Plans. If adopted, this amendment would change the interests assumption prescribed by the regulation, and make corresponding changes in the actuarial formulas used under the regulation, to eliminate inaccuracies inherent in the existing assumptionand to achieve uniformity with the interest assumption and formulas proposed for multiemployer plans.

DATES: Comments must be received on or before May 27, 1986.

ADDRESSES: Comments should be addressed to Director, Corporate Policy and Regulations Department (611), Pension Benefit Guaranty Corporation, 2020 K Street, NW., Washington, DC 20006. Written comments will be available for public inspection at the PBGC, Suite 7100, at the above address, between 9:00 a.m. and 4:00 p.m.

FOR FURTHER INFORMATION CONTACT: Deborah Murphy, Attorney, Corporate Policy and Regulations Department (611), 2020 K Street, NW., Washington, DC 20006, 202–254–4860 (202–254–8010 for TTY and TDD). These are not toll free numbers.

SUPPLEMENTARY INFORMATION:

Background

The Pension Benefit Guaranty Corporation ("PBGC") published a final regulation on Valuation of Plan Benefits in Non-Multiemployer Plans (the "Single-employer regulation") on January 28, 1981 (46 FR 9497). The regulation was subsequently amended and is now codified as 29 CFR Part 2619. On February 19, 1985 (50 FR 6956), the PBGC published a proposed regulation on Valuation of Plan Assets and Plan Benefits Following Mass Withdrawal (The "multiemployer regulation"). As proposed, the multiemployer regulation would be codified as 29 CFR Part 2676. For reasons discussed below, this proposed amendment would change the interest assumption under the existing single-employer regulation to make it the same as that under the multiemployer regulation.

Under the single-employer regulation, benefits in pay status on the valuation date are valued using a flat rate of interest (the immediate annuity rate). Benefits that are to start after the valuation date are valued in two steps. First, the benefit is valued as of its deferred starting date using the immediate annuity rate. Second, an adjustment is made for the period of deferral. The adjustment is represented by a factor that has the effect of reducing the assumed interest rate. The amount of reduction is greater for longer periods of deferral. The particular interest rates that are applicable from time to time, together with the manner of applying them to the valuation of benefits as summarized above, constitute the single-employer regulation's interest assumption.

The preamble to the original proposal version of the single-employer regulation (40 FR 57980, December 12, 1975), in discussing the adjustment factor for deferred benefits, noted that "[i]t is common financial practice to assume that the rate of return on investments made in the future will be lower than that for investments made in the present or near future." (40 FR at 57983.)

When the regulation was published as an interim rule, however (41 FR 48480, November 3, 1976), the preamble warned, in response to comments on the proposed rule, that the deferred benefit adjustment factor should not be "misconstrued as an investment model which actually reflects the investment yields which the PBGC expects to realize during a particular year of deferment. Rather, the current value of annuities obtained by applying the [factor] is in line with price data for such annuities received from the industry." (41 FR at 48485.)

Clearly, an interest assumption that applies the same rate (the immediate annuity rate) to every payment under a pay status annuity, as the single-employer regulation does, is not to be regarded as "an investment model." The design of the deferred benefit adjustment factor used in the regulation merely highlights that fact. As noted in the preamble to the proposed multi-employer regulation, the single-employer interest assumption "represents an appropriate compromise between actuarial theory . . . and administrative convenience." (50 FR at 6957.)

In this context," administrative convenience" means primarily ease of computation. Although many single-employer plans have been valued by computer for years, some (mostly small) plan valuations have not been computerized. The present single-employer interest assumption "facilitates the valuation of benefits 'by hand' (*i.e.*, using nothing more sophisticated than a desk calculator) from tables of relatively small bulk." (50 FR at 6957.)

In introducing the proposed multiemployer regulation, on the other hand, the PBGC indicated that, "[b]ecause of economies of scale, valuations by computer are not merely cost-justified but, in general, a financial, as well as logistical, necessity" for multiemployer plans. (50 FR at 6957.) This was one reason why the PBGC considered it appropriate to propose a select and ultimate interest assumption for multiemployer valuations. The primary motivation for proposing such an assumption, of course, was that the use of select and ultimate interest yields results that exhibit better internal consistency and closer agreement with marketplace values, both in the aggregate and for individual streams of payments. A select and ultimate interest assumption applies to each payment under a benefit an individually determined interest rate that depends on the amount of time between the valuation date and the date of payment. As a practical matter, therefore, the select and ultimate interest assumption makes valuations without the use of a computer impossible. On the other hand, it comes much closer to being an "investment model." Thus, in the PBGC's view, the multiemployer assumption leads to more realistic valuations than the single-employer assumption does.

A further problem with valuations under the existing single-employer regulation is that, as pointed out in the preamble to that regulation (46 FR at 9495), the adjustment factor for deferred benefits ingores the mortality of the beneficiary where joint and survivor benefits are being valued. Leaving the beneficiary's mortality out of the factor simplifies calculations that use the factor, but reduces the accuracy of values generated with the factor. The need for this distorting simplification would disappear if a computerized valuation method were adopted.

Until 1984, the provisions of the single-employer regulation that would be affected by this amendment applied almost exclusively to the PBGC itself, rather than to plan administrators. Thus, any administrative inconvenience arising from the adoption of this amendment would have been confined to a very few plans, primarily those for which the PBGC assumed the burden of paying certain deferred benefits.

Under sections 103 and 203 of the Retirement Equity Act of 1984, the interest rate assumption that the PBGC would use to value benefits on plan termination became the standard for determining the value of a participant's benefit in situations where the benefit is or may be cashed out. The PBGC specifically invites public comment on the administrative difficulty of processing cashouts using the proposed select and ultimate interest assumption as opposed to the existing single-employer interest assumption and on the number of cashouts that are processed by plans each year and that would be affected by the proposed assumption.

It appears that the valuation standards that would be changed by this amendment have been voluntarily adopted in some cases where their use is not legally mandated. The PBGC does not know what effect the proposed amendment might have on such situations, nor how many such situations there are. Comments are invited on the impact of the amendment on such cases and the extent to which any such impact should be considered by the PBGC.

Even for plans affected by this amendment, administrative inconvenience should be minimal. The single-employer regulation has been in effect, in interim and final form, since 1976, before the micocomputer had become the ubiquitous business tool that it is today. Microcomputers capable of handling actuarial computations with select and ultimate interest are as common now as electronic calculators were when the single-employer regulation was first drafted. The PBGC has thus concluded that accuracy need no longer make the concessions to administrative convenience that the existing single-employer interest assumption reflects.

Accordingly, the PBGC proposes to amend the single-employer regulation to substitute for the existing interest assumption the select and ultimate interest assumption used in the recently proposed multiemployer regulation. To reflect this change, the actuarial formulas in the single-employer regulation would be replaced by the corresponding formulas from the proposed multiemployer regulation.

The PBGC recognizes that microcomputer programs to evaluate actuarial formulas with select and ultimate interest may not be widely available, and that some people, including perhaps even some actuaries, may not feel confident about writing such programs for themselves. The PBGC is therefore considering the possibility of developing such programs and making them available to the public at cost. Public comment on this possibility is invited.

The Amendment

The major changes made by the amendment would be in Subpart C of the single-employer regulation (existing §§ 2619.41 through 2619.48). However, §§ 2619.3(a) and 2619.25(b)(2), which refer to certain Subpart C provisions, would be revised, and a new § 2619.25(c) would be added, simply to reflect changes that the amendment would make in Subpart C. Appendices A, B, and C, which contain mortality and interest tables, would be deleted, because mortality and interest tables in the amended regulation would be included in Subpart C.

The amendment would have no effect on the first section (§ 2619.41, *Purpose and scope*) or the last section (existing § 2619.48, *Withdrawal of employee contributions*) of Subpart C, except to renumber the latter as § 2619.46. All of the other sections of Subpart C would be deleted and replaced by slightly reworded versions of §§ 2676.12 through 2676.15 from the multiemployer regulation.

New § 2619.42(a) restates the rule from existing § 2619.43(b) regarding the form of benefit to be valued. New § 2619.42(b) restates the rule regarding the timing of benefits from existing § 2619.46(b). (Note that the latter rule is not the same as the corresponding provision of the proposed multiemployer regulation (§ 2676.12(b)).)

New § 2619.43(a) carries over the substance of existing §§ 2619.43(a) and (c) and 2619.44(a). Like existing § 2619.43(a) (and unlike § 2676.13(a) in the multiemployer regulation), the new section makes clear that the actuarial formulas set forth in the regulation are to be regarded as standards of accuracy, not as absolute requirements.

Paragraphs (b) through (i) of new § 2619.43 contain actuarial formulas that would replace the formulas now set forth in existing §§ 2619.44, 2619.45, and 2619.47. The new formulas in paragraphs (b) through (h) are identical with those in multiemployer § 2676.13(b) through (h). Paragraph (i) supplies new formulas for the death benefits described in existing § 2619.47(d) through (f), which were not included in the proposed multiemployer regulation.

The following table shows the location of the proposed new formula corresponding to each valuation provision in the existing regulation.

Existing provision	Proposed provision
§ 2619.44(c)	§ 2619.43(c)(2)
§ 2619.44(d)	§ 2619.43(c)(1)
§ 2619.44(e)	§ 2619.43(g)(2)
§ 2619.44(f)	§ 2619.43(g)(1)
§ 2619.44(g)	§ 2619.43(c)(3)
§ 2619.44(h)	§ 2619.43(e)(2)
§ 2619.44(i)	§ 2619.43(e)(1)
§ 2619.44(j)	§ 2619.43(e)(4)
§ 2619.44(k)	§ 2619.43(e)(4)
§ 2619.44(l)	§ 2619.43(e)(3)
§ 2619.45	§ 2619.43(b), (d), (f), (g)(3), (g)(4)
§ 2619.47(b)	§ 2619.43(h)(1)
§ 2619.47(c)	§ 2619.43(h)(2)
§ 2619.47(d)	§ 2619.43(i)(1)
§ 2619.47(e)	§ 2619.43(i)(1)
§ 2619.47(f)	§ 2619.43(i)(2)

Paragraphs (m) and (n) of existing § 2619.44 are no longer considered necessary and accordingly have no counterparts in the amended regulation. (Those provisions merely explained that two common forms of benefit—cash refund and installment refund annuities—could be analyzed in terms of other benefits listed elsewhere in the regulations.) The benefits described in existing §§ 2619.44(j) and 2619.47(d) are simply special cases of the benefits described in amended § 2619.43(e)(4) and (i)(1) respectively.

New § 2619.44 contains the prescribed mortality tables currently found in appendix C. (Appendix A, containing data from which the mortality tables in Appendix C can be derived, is no longer considered necessary. Thus both Appendices A and C are replaced by new § 2619.44.) New § 2619.44 also contains provisions derived from existing § 2619.44(b) concerning the circumstances under which each table is to be used.

The select and ultimate rate series that is at the heart of the amendment would be set forth in new § 2619.45. The series used in this regulation would be identical with the series used in the multiemployer regulation. A new series would be promulgated each month as necessary to respond to changes in current rates of investment return and expectations regarding future rates. The rate series would be constructed so as to produce values, for a typical plan, within a few percent of the cost of commercial annuities covering the plan's benefits—the same criterion used in setting rates under the existing single-employer regulation. Existing Appendix B, which contains interest rates applicable under the current regulation, would be superseded by new § 2619.45.

E.O. 12291 and the Regulatory Flexibility Act

The PBGC has determined that this proposed regulation is not a "major rule" for the purposes of Executive Order 12291, because it will not have an

annual effect on the economy of $100 million or more; or create a major increase in costs or prices for consumers, individual industries, or geographic regions; or have significant adverse effects on competition, employment, investment, innovation, or the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

Under section 605(b) of the Regulatory Flexibility Act, the PBGC certifies that this rule will not have a significant economic impact on a substantial number of small entities. Pension plans with fewer than 100 participants have traditionally been treated as small plans. Such plans typically contract with actuarial firms, insurance companies, and other service providers for actuarial services. The larger providers of actuarial services perform valuations by computer, and such providers serve the great majority of small plans. For such service providers, the proposed amendment would necessitate a one-tme programming expense that would be amortized over a period of time and spread among not ony small plan clients but larger plan clients as well. The economic impact of the amendment on each such small plan would thus be insignificant. While the amendment might have a significant economic impact on small plans that are not currently valued by computer, the number of such plans is considered to be insignificant. Therefore, compliance with sections 603 and 604 of the Regulatory Flexibity Act is waived.

Public Comments

Interested parties are invited to submit comments on this proposed regulation. Comments should be addressed to: Director, Corporate Policy and Regulations Department (611), Pension Benefit Guaranty Corporation, 2020 K Street, NW., Washington, DC 20006. Written comments will be available for public inspection at the above address, Suite 7100, between the hours of 9:00 a.m. and 4:00 p.m. Comments should include the commenter's name and address, identify this proposed regulation, and give reasons for any recommendation. This proposal may be changed in light of the comments received.

List of Subjects in 29 CFR Part 2619

Employee benefits plans, Pension insurance, Pensions.

PART 2619—[AMENDED]

In consideration of the foregoing, it is proposed that 29 CFR Part 2619 be amended as follows:

1. The authority citation for Part 2619 continues to read as follows:

Authority: Secs. 4002(b)(3), 4041(b), 4044, 4062(b)(1)(A), Pub. L. 93-406, 88 Stat. 1004, 1020, 1025, 1029, as amended by secs. 403(1), 403(d), 402(a)(7), Pub. L. 96-364, 94 Stat. 1302, 1301, 1299 (29 U.S.C. 1302, 1341, 1344, 1362).

2. In § 2619.3, paragraph (a) is revised to read as follows:

§ 2619.3 General valuation rules.

(a) *Non-trusteed plans.* Plan administrators of non-trusteed plans shall value plan benefits in accordance with Subpart B of this part, except for any early retirement benefits to be provided by PBGC, which shall be valued in accordance with Subpart C. If a plan with respect to which PBGC has issued a Notice of Sufficiency is unable to satisfy all benefits assigned to priority categories 1 through 4 on the date of distribution, the PBGC will place it into trusteeship and the plan administrator shall re-value the benefits in accordance with Subpart C of this part.

* * * * *

3. In § 2619.25, paragraph (b)(2) is revised, and a new paragraph (c) is added, to read as follows:

§ 2619.25 Early retirement benefits.

* * * * *

(b) * * *

(2) If the plan administrator is unable to obtain a qualifying bid described in paragraph (b)(1), then the plan administrator may arrange for the PBGC to become responsible for the payment of such benefits in accordance with Subpart D of Part 2617 of this chapter. If such an arrangment is made, the plan administrator shall calculate the value of all such early retirement benefits in accordance with paragraph (c) of this section, and the PBGC will provide these benefits as set forth in Part 2617 of this chapter. If the PBGC does not provide these benefits, the value of each early retirement benefit is its cost under the qualifying bid.

(c) *Valuation of early retirement benefits.* An early retirement benefit that is to be provided by an insurer pursuant to a qualifying bid is valued in accordance with paragraph (a) of this section. An early retirement benefit that is to be provided by PBGC in accordance with Part 2617 is valued as an annuity in accordance with Subpart C of this part.

4. Sections 2619.42 through 2619.45 are revised to read as follows:

§ 2619.42 Benefits to be valued.

(a) *Form of benefit.* The plan administrator shall determine the form of each benefit to be valued, without regard to the form of benefit valued in any prior year, in accordance with the following rules:

(1) If a benefit is in pay status as of the valuation date, the plan administrator shall value the form of benefit being paid.

(2) If a benefit is not in pay status as of the valuation date but a valid election with respect to the form of benefit has been made on or before the valuation date, the plan administrator shall value the form of benefit so elected.

(3) If a benefit is not in pay status as of the valuation date and no valid election with respect to the form of benefit has been made on or before the valuation date, the plan administrator shall value the form of benefit that is payable under the terms of the plan in the absence of a valid election.

(b) *Timing of benefit.* The plan administrator shall value benefits whose starting date is subject to election using the assumption specified in paragraph (b)(1) or (b)(2) of this section.

(1) *Where election made.* If a valid election of the starting date of a benefit has been made on or before the valuation date, the plan administrator shall assume that the starting date of the benefit is the starting date so elected.

(2) *Where no election made.* If no valid election of the starting date of a benefit has been made on or before the valuation date, the plan administrator shall assume that the starting date of the benefit is the later of—

(i) The expected retirement age, as determined under Subpart D of this part, of the participant with respect to whom the benefit is payable, or

(ii) The valuation date.

§ 2619.43 Valuation methods.

(a) *General rule.* The plan administrator shall value benefits as of the valuation date using—

(1) The mortality and interest assumptions prescribed by §§ 2619.44 and 2619.45,

(2) Interpolation methods, where necessary, at least as accurate as linear interpolation, and

(3) Formulas that are at least as accurate as the formulas set forth in paragraphs (b)–(i) of this section.

(b) *Single-sum payments (other than death benefits).* The present value of a single-sum payment of ^{1} to be made ^{n}

years after the valuation date may be found as follows:

(1) If the payment is not contingent on the survival of any person:

$$v^{0:n} = \left(\frac{1}{1+i_{k+1}}\right)^{j} \cdot \prod_{t=1}^{k}\left(\frac{1}{1+i_t}\right),$$

where $n=k+j$, k is an integer, $0 \leq j < 1$, $v^{0:0}=1$, and i_k is the interest rate determined under § 2619.45 applicable to the year ending on the kth anniversary of the valuation date.

(2) If the payment is contingent on the survival of a person aged x on the valuation date:

$$_np_x \cdot v^{0:n} = \frac{l_{x+n}}{l_x} \cdot v^{0:n},$$

where l_x and l_{x+n} are the numbers of persons living at ages x and $x+n$ respectively, as determined under § 2619.44.

(3) If the payment is contingent on the survival of two persons aged x and y respectively on the valuation date:

$$_np_x \cdot {}_np_y \cdot v^{0:n}.$$

(c) *Basic annuities in pay status.* The present value of an annuity due providing payments of $1/m$, m times per year, starting on the valuation date, may be found as follows:

(1) If the annuity is for a term certain of r years after the valuation date and is not contingent on the survival of any person:

$$\ddot{a}_{\overline{r}|}^{(m)} = \frac{1}{m}\sum_{t=0}^{r-1} \frac{v^{0:t}(v^{0:t} - v^{0:t+1})}{v^{0:t} - v^{0:t+(1/m)}}.$$

(2) If the annuity is for the life of a person aged x on the valuation date:

$$a_x^{(m)} = \sum_{t=0}^{\infty} v^{0:t} \cdot {}_tp_x \cdot \frac{m-1}{2m}.$$

(3) If the annuity is for the joint lives of two persons aged x and y on the valuation date:

$$a_{x:y}^{(m)} = \sum_{t=0}^{\infty} v^{0:t} \cdot {}_tp_x \cdot {}_tp_y \cdot \frac{m-1}{2m}.$$

(d) *Basic deferred annuities.* The present value of an annuity due providing payments of $1/m$, m times per year, starting n years after the valuation date, may be found as follows:

(1) If the annuity is for a term certain of r years and is not contingent on the survival of any person:

$$_{n|}\ddot{a}_{\overline{r}|}^{(m)} = \ddot{a}_{\overline{n+r}|}^{(m)} - \ddot{a}_{\overline{n}|}^{(m)}.$$

(2) If the annuity is for a term certain of r years and is contingent on the survival for n years of a person aged x on the valuation date:

$$_np_x \cdot {}_{n|}\ddot{a}_{\overline{r}|}^{(m)}.$$

(3) If the annuity is for the life of a person aged x on the valuation date:

$$_{n|}\ddot{a}_x^{(m)} = \sum_{t=n}^{\infty} v^{0:t} \cdot {}_tp_x - v^{0:n} \cdot {}_np_x \cdot \frac{m-1}{2m}.$$

(4) If the annuity is for the life of a person aged y on the valuation date and is contingent on the survival for n years of a person aged x on the valuation date:

$$_np_x \cdot {}_{n|}\ddot{a}_y^{(m)}.$$

(5) If the annuity is for the joint lives of two persons aged x and y on the valuation date:

$$_{n|}\ddot{a}_{x:y}^{(m)} = \sum_{t=n}^{\infty} v^{0:t} \cdot {}_tp_x \cdot {}_tp_y - v^{0:n} \cdot {}_np_x \cdot {}_np_y \cdot \frac{m-1}{2m}.$$

(e) *Joint and survivor annuities in pay status.* The present value of an annuity due providing payments m times per year, starting on the valuation date, in an initial amount of $1/m$ per payment, and in an ultimate amount of s/m per payment, may be found as follows:

(1) If the annuity is payable in the initial amount for the life of a person aged x on the valuation date and, after the death of that person, in the ultimate amount for the life of a person aged y on the valuation date:

$$\ddot{a}_x^{(m)} + s(\ddot{a}_y^{(m)} - \ddot{a}_{x:y}^{(m)}).$$

(2) If the annuity is payable in the initial amount for the joint lives of two persons aged x and y on the valuation date and, after the death of either of those persons, in the ultimate amount for the life of the survivor:

$$\ddot{a}^{(m)}_{x:y} + s(\ddot{a}^{(m)}_{x} + \ddot{a}^{(m)}_{y} - 2\cdot\ddot{a}^{(m)}_{x:y}).$$

(3) If the annuity is payable in the initial amount for a term certain of r years after the valuation date or for the life of a person aged x on the valuation date (whichever of those two periods is longer) and, after the expiration of the term certain and the death of that person, in the ultimate amount for the life of a person aged y on the valuation date:

$$\ddot{a}^{(m)}_{\overline{r}|} + {}_{r|}\ddot{a}^{(m)}_{x} + s({}_{r|}\ddot{a}^{(m)}_{y} - {}_{r|}\ddot{a}^{(m)}_{x:y}).$$

(4) If the annuity is payable in the initial amount for a term certain of r years after the valuation date or for the joint lives of two persons aged x and y on the valuation date (whichever of those two periods is longer) and, after the expiration of the term certain and the death of either of the persons, in the ultimate amount for the life of the survivor:

$$\ddot{a}^{(m)}_{\overline{r}|} + {}_{r|}\ddot{a}^{(m)}_{x:y} + s({}_{r|}\ddot{a}^{(m)}_{x} + {}_{r|}\ddot{a}^{(m)}_{y} - 2\cdot{}_{r|}\ddot{a}^{(m)}_{x:y}).$$

(f) *Deferred joint and survivor annuities.* The present value of an annuity due providing payments m times per year, starting n years after the valuation date, in an initial amount of $1/m$ per payment, and in an ultimate amount of s/m per payment, contingent on the survival for n years of a person aged x on the valuation date, may be found as follows:

(1) If the annuity is payable in the initial amount for the life of the person and, after the death of that person, in the ultimate amount for the life of a person aged y on the valuation date:

$$n|\ddot{a}^{(m)}_{x} + s({}_{n}p_{x}\cdot{}_{n|}\ddot{a}^{(m)}_{y} - {}_{n|}\ddot{a}^{(m)}_{x:y}).$$

(2) If the annuity is payable in the initial amount for the joint lives of the person and a person aged y on the valuation date and, after the death of either of those persons, in the ultimate amount for the life of the survivor:

$$n|\ddot{a}^{(m)}_{x:y} + s({}_{n|}\ddot{a}^{(m)}_{x} + {}_{n}p_{x}\cdot{}_{n|}\ddot{a}^{(m)}_{y} - 2\cdot{}_{n|}\ddot{a}^{(m)}_{x:y}).$$

(3) If the annuity is payable in the initial amount for a term certain of r years or for the life of the person (whichever of those two periods is longer) and, after the expiration of the term certain and the death of that person, in the ultimate amount for the life of a person aged y on the valuation date:

$${}_{n}p_{x}\cdot{}_{n|}\ddot{a}^{(m)}_{\overline{r}|} + {}_{n+r|}\ddot{a}^{(m)}_{x} + s({}_{n}p_{x}\cdot{}_{n+r|}\ddot{a}^{(m)}_{y} - {}_{n+r|}\ddot{a}^{(m)}_{x:y}).$$

(4) If the annuity is payable in the initial amount for a term certain of r years or for the joint lives of the person and a person aged y on the valuation date (whichever of those two periods is longer) and, after the expiration of the term certain and the death of either of those persons, in the ultimate amount for the life of the survivor:

$$ {}_{n}p_{x} \cdot {}_{n|}\ddot{a}^{(m)}_{\overline{r}|} + {}_{n+r|}\ddot{a}^{(m)}_{x:y} + s\left({}_{n+r|}\ddot{a}^{(m)}_{x} + {}_{n}p_{x} \cdot {}_{n+r|}\ddot{a}^{(m)}_{y} - 2 \cdot {}_{n+r|}\ddot{a}^{(m)}_{x:y}\right). $$

(g) *Single life or certain annuities.* The present value of an annuity due providing payment of $1/m$, m times per year, for the life of a person aged x on the valuation date or a term certain of r years, may be found as follows:

(1) If the annuity starts on the valuation date and is for the shorter of those two periods:

$$ \ddot{a}^{(m)}_{x} - {}_{r|}\ddot{a}^{(m)}_{x}. $$

(2) If the annuity starts on the valuation date and is for the longer of those two periods:

$$ \ddot{a}^{(m)}_{\overline{r}|} + {}_{r|}\ddot{a}^{(m)}_{x}. $$

(3) If, contingent on the survival of the person for n years, the annuity starts n years after the valuation date and is for the shorter of those two periods:

$$ {}_{n|}\ddot{a}^{(m)}_{x} - {}_{n+r|}\ddot{a}^{(m)}_{x}. $$

(4) If, contingent on the survival of the person for n years, the annuity starts n years after the valuation date and is for the longer of those two periods:

$$ {}_{n}p_{x} \cdot {}_{n|}\ddot{a}^{(m)}_{\overline{r}|} + {}_{n+r|}\ddot{a}^{(m)}_{x}. $$

(h) *Fixed single-sum death benefits.* The present value of a fixed single-sum payment of 1 to be made upon the death of a person aged x on the valuation date may be found as follows:

(1) If the payment is to be made whenever death occurs:

$$ \bar{A}_{x} = \sum_{t=0}^{\infty} v^{0:\,t+\frac{1}{2}} \left({}_{t}p_{x} - {}_{t+1}p_{x}\right). $$

(2) If the payment is to be made only if the person dies within r years after the valuation date:

$$ \bar{A}^{1}_{x:\overline{r}|} = \sum_{t=0}^{r-1} v^{0:\,t+\frac{1}{2}} \left({}_{t}p_{x} - {}_{t+1}p_{x}\right). $$

(3) If the payment is to be made only if the person dies at least n years after the valuation date:

$$ \bar{A}_{x} - \bar{A}^{1}_{x:\overline{n}|}. $$

(4) If the payment is to be made only if the person dies at least n years, but within $n+r$ years, after the valuation date:

$$ \bar{A}^{1}_{x:\overline{n+r}|} - \bar{A}^{1}_{x:\overline{n}|}. $$

(i) *Variable single-sum death benefits.* The present value of a single-sum payment to be made upon the death of a person aged x on the valuation date, if the person dies within r years after the valuation date, may be found as follows:

(1) If the amount payable is initially $r-1/m$ and decreases by $1/m$, m times per year:

$$\sum_{t=0}^{r-1} \left(r - t - \frac{m+1}{2m}\right) \cdot v^{0:t+\frac{1}{2}} \cdot \left({}_tp_x - {}_{t+1}p_x\right) \cdot$$

(2) If the amount payable is intially and increases at an effective interest rate of j, compounded annually:

$$\sum_{t=0}^{r-1} (1+j)^{t+\frac{1}{2}} \cdot v^{0:t+\frac{1}{2}} \cdot \left({}_tp_x - {}_{t+1}p_x\right) \cdot$$

§ 2619.44 Mortality.

(a) *General rule.* In determining the value of mortality factors of the form ${}_np_x$ (as defined in § 2619.43(b)(2)) for purposes of applying the formulas set forth in § 2619.43 (b)–(i), and in determining the value of any mortality factor used in valuing benefits under this subpart, the plan administrator shall use the values of l_x prescribed in paragraphs (d), (e) and (f) of this section.

(b) *Certain death benefits.* If an annuity for one person is in pay status on the valuation date, and if the payment of a death benefit after the valuation date to another person, who need not be identifiable on the valuation date, depends in whole or in part on the death of the pay status annuitant, then to determine the mortality factors involved in the valuation of the death benefit—

(1) In the case of factors that represent the mortality of the pay status annuitant, the plan administrator shall apply the mortality rates that are applicable to the annuity in pay status under paragraph (d), (e) or (f) of this section; and

(2) In the case of factors that represent the mortality of the death beneficiary, the plan administrator shall apply the mortality rates applicable to annuities not in pay status and to deferred benefits other than annuities, under paragraph (d) of this section.

(c) *Description of mortality tables.* The tables in paragraphs (d), (e) and (f) of this section tabulate, for each age (denoted by x, $x \geqq 15$), the number of persons assumed to be living at that age (denoted by l_x) out of a closed group consisting originally of 10,000 persons aged 15 years.

(d) *Healthy lives.* The values of l_x applicable to annuities in pay status on the valuation date that are not being received as disability benefits, to annuities not in pay status on the valuation date, and to deferred benefits other than annuities, are as follows:

MORTALITY TABLE FOR HEALTHY MALE PARTICIPANTS

Age x	l_x	Age x	l_x
15	10,000.0000		
16	9,985.6300		
17	9,971.5103		
18	9,957.6998		
19	9,944.2469		
20	9,931.2100		
21	9,918.6272		
22	9,906.5364		
23	9,894.9755		
24	9,883.6062		
25	9,872.4476		
26	9,861.5188		
27	9,850.8388		
28	9,840.4166		
29	9,829.7594		
30	9,818.8385		
31	9,807.6352		
32	9,796.1308		
33	9,784.2971		
34	9,771.6069		
35	9,757.9462		
36	9,743.1824		
37	9,727.1744		
38	9,709.7433		
39	9,690.8287		
40	9,670.2357		
41	9,674.7331		
42	9,623.0735		
43	9,595.9557		
44	9,566.2562		
45	9,533.6353		
46	9,497.7030		
47	9,458.0026		
48	9,414.1648		
49	9,366.1243		
50	9,313.5241		
51	9,255.8175		
52	9,192.3874		
53	9,123.0492		
54	9,047.5286		
55	8,965.8023		
56	8,877.2650		
57	8,781.2663		
58	8,677.0941		
59	8,564.7084		
60	8,443.4150		
61	8,312.4661		

MORTALITY TABLE FOR HEALTHY MALE PARTICIPANTS—Continued

Age x	l_x	Age x	l_x
62	8,171.0711		
63	8,018.3946		
64	7,853.8812		
65	7,676.6819		
66	7,485.9394		
67	7,282.0823		
68	7,066.2851		
69	6,839.6481		
70	6,602.0182		
71	6,353.3400		
72	6,093.6726		
73	5,822.4798		
74	5,540.0662		
75	5,246.9247		
76	4,943.7836		
77	4,631.6232		
78	4,313.7642		
79	3,991.7503		
80	3,667.3966		
81	3,342.7660		
82	3,021.1317		
83	2,705.9975		
84	2,400.7177		
85	2,107.6405		
86	1,829.0652		
87	1,567.1815		
88	1,324.0380		
89	1,101.3242		
90	900.3755		
91	722.0741		
92	566.8029		
93	434.7475		
94	324.9542		
95	235.9564		
96	165.8415		
97	112.3488		
98	73.0823		
99	45.3940		
100	26.7427		
101	14.8217		
102	7.6505		
103	3.6393		
104	1.5708		
105	0.6026		
106	0.1996		
107	0.0547		
108	0.0117		
109	0.0017		
110	0.0001		

MORTALITY TABLE FOR HEALTHY FEMALE PARTICIPANTS

Age x	l_x	Age x	l_x
15	10,000.0000	63	8,677.0941
16	10,000.0000	64	8,564.7084
17	10,000.0000	65	8,443.4150
18	10,000.0000	66	8,312.4661
19	10,000.0000	67	8,171.0711
20	10,000.0000	68	8,018.3946
21	9,985.6300	69	7,853.8812
22	9,971.5103	70	7,676.6819
23	9,957.6998	71	7,485.9394
24	9,944.2469	72	7,282.0823
25	9,931.2100	73	7,066.2851
26	9,918.6272	74	6,839.6481
27	9,906.5364	75	6,602.0182
28	9,894.9755	76	6,353.3400
29	9,883.6062	77	6,093.6726
30	9,872.4476	78	5,822.4798
31	9,861.5188	79	5,540.0662
32	9,850.8388	80	5,246.9247
33	9,840.4166	81	4,943.7836
34	9,829.7594	82	4,631.6232
35	9,818.8385	83	4,313.7642
36	9,807.6352	84	3,991.7503
37	9,796.1308	85	3,667.3966
38	9,784.2971	86	3,342.7660
39	9,771.6069	87	3,021.1317
40	9,757.9462	88	2,705.9975
41	9,743.1824	89	2,400.7177
42	9,727.1744	90	2,107.6405
43	9,709.7433	91	1,829.0652
44	9,690.8287	92	1,567.1815
45	9,670.2357	93	1,324.0380
46	9,647.7331	94	1,101.3242
47	9,623.0735	95	900.3755

MORTALITY TABLE FOR HEALTHY FEMALE PARTICIPANTS—Continued

Age x	l_x	Age x	l_x
48	9,595.9557	96	722.0741
49	9,566.2562	97	566.8029
50	9,533.6353	98	434.7475
51	9,497.7030	99	324.9542
52	9,458.0026	100	235.9564
53	9,414.1648	101	165.8415
54	9,366.1243	102	112.3488
55	9,313.5241	103	73.0823
56	9,255.8175	104	45.3940
57	9,192.3874	105	26.7427
58	9,123.0492	106	14.8217
59	9,047.5286	107	7.6505
60	8,965.8023	108	3.6393
61	8,877.2650	109	1.5708
62	8,781.2663	110	0.6026

(e) *Disabled lives (other than Social Security disability).* The values of l_x applicable to annuities in pay status on the valuation date that are being received as disability benefits and for which neither eligibility for, nor receipt of, Social Security disability benefits is a prerequisite, are as follows:

MORTALITY TABLE FOR DISABLED MALE PARTICIPANTS NOT RECEIVING SOCIAL SECURITY DISABILITY BENEFIT PAYMENTS

Age x	l_x	Age x	l_x
15	10,000.0000	63	7,517.7396
16	9,986.4900	64	7,313.0165
17	9,973.3977	65	7,096.3026
18	9,960.7614	66	6,868.7029
19	9,948.6192	67	6,630.0636
20	9,937.0092	68	6,380.3290
21	9,925.5916	69	6,119.5586
22	9,914.3856	70	5,847.2138
23	9,903.4104	71	5,563.6005
24	9,892.6850	72	5,269.2137
25	9,882.2185	73	4,964.7849
26	9,871.5161	74	4,651.2985
27	9,860.5488	75	4,332.0892
28	9,849.2979	76	4,008.7074
29	9,837.7447	77	3,682.9759
30	9,825.8607	78	3,356.9662
31	9,813.1166	79	3,033.9656
32	9,799.3979	80	2,717.4926
33	9,784.5714	81	2,410.9160
34	9,768.4953	82	2,116.5938
35	9,750.9902	83	1,836.8351
36	9,731.9953	84	1,573.8389
37	9,711.3148	85	1,329.6625
38	9,688.7166	86	1,106.0026
39	9,663.9522	87	904.2003
40	9,636.7192	88	725.1415
41	9,606.8936	89	569.2107
42	9,574.1341	90	436.5943
43	9,538.0492	91	326.3346
44	9,498.1802	92	236.9587
45	9,454.1561	93	166.5459
46	9,405.9115	94	112.8260
47	9,353.0879	95	73.3927
48	9,295.1362	96	45.5868
49	9,231.4366	97	26.8563
50	9,161.8039	98	14.8846
51	9,085.9625	99	7.6830
52	9,003.8890	100	3.6548
53	8,914.9756	101	1.5775
54	8,818.5691	102	0.6052
55	8,713.9544	103	0.2005
56	8,601.0913	104	0.0550
57	8,479.2826	105	0.0117
58	8,347.7774	106	0.0017
59	8,205.7817	107	0.0001
60	8,052.4567		
61	7,887.2444		
62	7,709.2924		

MORTALITY TABLE FOR DISABLED FEMALE PARTICIPANTS NOT RECEIVING SOCIAL SECURITY DISABILITY BENEFIT PAYMENTS

Age x	l_x	Age x	l_x
15	10,000.0000	63	8,347.7774
16	10,000.0000	64	8,205.7817
17	10,000.0000	65	8,052.4567
18	10,000.0000	66	7,887.2444
19	10,000.0000	67	7,709.2924
20	10,000.0000	68	7,517.7396
21	9,986.4900	69	7,313.0165
22	9,973.3977	70	7,096.3026
23	9,960.7614	71	6,868.7029
24	9,948.6192	72	6,630.0636
25	9,937.0092	73	6,380.3290
26	9,925.5916	74	6,119.5586
27	9,914.3856	75	5,847.2138
28	9,903.4104	76	5,563.6005
29	9,892.6850	77	5,269.2137
30	9,882.2185	78	4,964.7849
31	9,871.5161	79	4,651.2985
32	9,860.5488	80	4,332.0892
33	9,849.2979	81	4,008.7074
34	9,837.7447	82	3,682.9759
35	9,825.8607	83	3,356.9662
36	9,813.1166	84	3,033.9656
37	9,799.3979	85	2,717.4926
38	9,784.5714	86	2,410.9160
39	9,768.4953	87	2,116.5938
40	9,750.9902	88	1,836.8351
41	9,731.9953	89	1,573.8389
42	9,711.3148	90	1,329.6625
43	9,688.7166	91	1,106.0026
44	9,663.9522	92	904.2003
45	9,636.7192	93	725.1415
46	9,606.8936	94	569.2107
47	9,574.1341	95	436.5943
48	9,538.0492	96	326.3346
49	9,498.1802	97	236.9587
50	9,454.1561	98	166.5459
51	9,405.9115	99	112.8260
52	9,353.0879	100	73.3927
53	9,295.1362	101	45.5868
54	9,231.4366	102	26.8563
55	9,161.8039	103	14.8846
56	9,085.9625	104	7.6830
57	9,003.8890	105	3.6548
58	8,914.9756	106	1.5775
59	8,818.5691	107	0.6052
60	8,713.9544	108	0.2005
61	8,601.0913	109	0.0550
62	8,479.2826	110	0.0117

(f) *Disabled lives (Social Security disability).* The values of l_x applicable to annuities in pay status on the valuation date that are being received as disability benefits and for which either eligibility for, or receipt of, Social Security disability benefits is a prerequisite, are as follows:

MORTALITY TABLE FOR DISABLED MALE PARTICIPANTS RECEIVING SOCIAL SECURITY DISABILITY BENEFIT PAYMENTS

Age x	l_x	Age x	l_x
15	10,000.0000	34	5,462.4416
16	10,000.0000	35	5,305.1233
17	10,000.0000	36	5,157.6409
18	10,000.0000	37	5,017.3531
19	10,000.0000	38	4,881.3228
20	10,000.0000	39	4,748.1210
21	9,517.0000	40	4,617.0729
22	9,057.3289	41	4,486.8714
23	8,619.6599	42	4,357.6495
24	8,203.5207	43	4,228.2274
25	7,807.2906	44	4,099.2664
26	7,430.1985	45	3,970.5495
27	7,087.6663	46	3,842.6978
28	6,778.6441	47	3,715.8887
29	6,500.0418	48	3,589.5485
30	6,249.1402	49	3,462.8375
31	6,022.9213	50	3,335.7513
32	5,818.7443	51	3,207.9920
33	5,632.5445		

MORTALITY TABLE FOR DISABLED MALE PARTICIPANTS RECEIVING SOCIAL SECURITY DISABILITY BENEFIT PAYMENTS—Continued

Age x	l_x	Age x	l_x
52	3,079.3516	81	373.4371
53	2,950.0188	82	327.8404
54	2,820.5130	83	284.4999
55	2,690.7694	84	243.7595
56	2,561.0743	85	205.9524
57	2,431.4839	86	171.3112
58	2,302.3721	87	140.0469
59	2,174.5905	88	112.3176
60	2,048.2468	89	88.1693
61	1,924.7375	90	67.6259
62	1,804.6339	91	50.5503
63	1,688.5959	92	36.7046
64	1,577.6552	93	25.7960
65	1,472.2678	94	17.4742
66	1,372.4480	95	11.3670
67	1,278.1609	96	7.0600
68	1,189.0731	97	4.1591
69	1,104.7678	98	2.3050
70	1,024.8931	99	1.1898
71	949.1535	100	.5660
72	877.3025	101	.2443
73	809.2239	102	.0937
74	744.8096	103	.0310
75	683.8842	104	.0085
76	626.3012	105	.0018
77	571.8756	106	.0003
78	519.9493		
79	469.9302		
80	420.9165		

MORTALITY TABLE FOR DISABLED FEMALE PARTICIPANTS RECEIVING SOCIAL SECURITY DISABILITY BENEFIT PAYMENTS

Age x	l_x	Age x	l_x
15	10,000.0000	63	3,303.6079
16	10,000.0000	64	3,186.3299
17	10,000.0000	65	3,070.9847
18	10,000.0000	66	2,957.3583
19	10,000.0000	67	2,845.5701
20	10,000.0000	68	2,735.7311
21	9,737.0000	69	2,627.9433
22	9,480.9169	70	2,522.3000
23	9,231.5688	71	2,418.6335
24	8,988.7785	72	2,316.8090
25	8,752.3737	73	2,216.4912
26	8,522.1862	74	2,117.4140
27	8,303.1660	75	2,018.9543
28	8,098.0959	76	1,919.6217
29	7,893.1965	77	1,818.0737
30	7,702.1811	78	1,712.9891
31	7,519.6394	79	1,604.8985
32	7,345.1838	80	1,494.8034
33	7,178.4481	81	1,383.2910
34	7,019.0866	82	1,270.8295
35	6,866.0705	83	1,158.3611
36	6,719.1366	84	1,046.9267
37	6,576.6909	85	937.7323
38	6,438.5804	86	831.9561
39	6,304.6579	87	730.3742
40	6,173.5210	88	633.8188
41	6,044.4944	89	543.0559
42	5,917.5600	90	458.8279
43	5,791.5160	91	381.6531
44	5,666.4193	92	312.0014
45	5,542.3247	93	250.2251
46	5,418.1766	94	196.4267
47	5,294.1004	95	150.6593
48	5,169.6890	96	112.6178
49	5,044.5825	97	81.7718
50	4,918.9724	98	57.4692
51	4,792.5548	99	38.9297
52	4,666.0314	100	25.3237
53	4,539.1153	101	15.7286
54	4,411.5662	102	9.2657
55	4,284.5131	103	5.1351
56	4,158.1200	104	2.6507
57	4,032.9605	105	1.2609
58	3,909.1487	106	.5542
59	3,786.0105	107	.2088
60	3,663.7223	108	.0692
61	3,542.4531	109	.0190
62	3,422.3640	110	.0041

§ 2619.45 Interest.

(a) *General rule.* In determining the value of interest factors of the form $v^{0:n}$ (as defined in § 2619.43(b)(1)) for purposes of applying the formulas set forth in § 2619.43(b)–(i) and in determining the value of any interest factor used in valuing benefits under this subpart, the plan administrator shall use the values of i_k prescribed in paragraph (c) of this section.

(b) *Description of interest table.* The table in paragraph (c) of this section tabulates, for each calendar month ending after the effective date of this part, the interest rates (denoted by i_1, i_2, . . ., i_{15}, i_u, and referred to generally as i_k) assumed to be in effect during each one-year period ending on an anniversary (the first, second, . . ., fifteenth, and subsequent aniversaries, respectively, and referred to generally as the k_{th} anniversary) of a valuation date that occurs within that calendar month; the rate i_u is assumed to be in effect during the sixteenth and all subsequent years. For example, the interest rate assumed to be in effect during the one-year period ending on the seventh anniversary of the valuation date is tabulated as i_7, and the rate assumed to be in effect during the one-year period ending on the seventeenth anniversary of the valuation date is tabulated as i_u.

(c) *Interest rates.*

For valuation dates occurring in the month:	The values of i_k are:															
	i_1	i_2	i_3	i_4	i_5	i_6	i_7	i_8	i_9	i_{10}	i_{11}	i_{12}	i_{13}	i_{14}	i_{15}	i_u
X/85	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]	.[illegible]

§ § 2619.46 and 2619.47 [Removed]

§2619.48 [Redesignated as § 2619.46]

5. Sections 2619.46 and 2619.47 are removed, and § 2619.48 is redesignated as § 2619.46.

Appendices A, B, and C [Removed]

6. Appendices A, B and C are removed.

Issued in Washington, DC, on February 27, 1986.

William E. Brock,

Chairman of the Board of Directors, Pension Benefit Guaranty Corporation.

Issued pursuant to a resolution of the Board of Directors approving, and authorizing its chairman to issue, this notice of proposed rulemaking.

Edward R. Mackiewicz,

Secretary to the Board of Directors, Pension Benefit Guaranty Corporation.

[FR Doc. 86–6118 Filed 3–24–86; 8:45 am]

BILLING CODE 7708-01-M

Federal Register

Tuesday
March 25, 1986

Part III

Department of Transportation

Federal Aviation Administration

14 CFR Part 33
Airworthiness Standards; Aircraft Engines; Turboprop Engine Propeller Brake; Final Rule

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 33

[Docket No. 23737; Amdt No. 33-11]

Airworthiness Standards; Aircraft Engines; Turboprop Engine Propeller Brake

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment establishes new airworthiness standards applicable to turbopropeller engines equipped with a propeller brake. The brake allows the propeller to be brought to a stop while the gas generator portion of the engine remains in operation as an auxiliary power unit (APU). The amendment is needed to establish an appropriate level of safety for the certification of aircraft engines with this new feature.

EFFECTIVE DATE: April 24, 1986.

FOR FURTHER INFORMATION CONTACT: Donald F. Perrault, Engine and Propeller Standards Staff, ANE-110, Aircraft Certification Division, New England Region, Federal Aviation Administration, 12 New England Executive Park, Burlington, Massachusetts 01803; telephone (617) 273-7081.

SUPPLEMENTARY INFORMATION

Background

A Notice of Proposed Rulemaking (NPRM), No. 84-23, was published in the **Federal Register** (49 FR 48760) on December 14, 1984. The NPRM proposed to establish new airworthiness standards applicable to the type certification of turbopropeller engines equipped with a propeller brake. Such engines feature a brake which allows the propeller to be brought to a stop while the gas generator portion of the engine remains in operation as an APU. Certification standards for such engines are not presently included in the Federal Aviation Regulations (FARs), and engine designs with this feature have, to date, been certificated through special conditions. As it is anticipated that such engine designs will continue to be submitted for airworthiness certification in the future, the FAA has determined that appropriate airworthiness standards should be established in the FARs. This amendment establishes type certification test requirements for turbopropeller engines also used as an APU. The tests are intended to provide for assessment of:

(a) Hot section tolerance for locked rotor operations effects on combustor stability/coking, turbine nozzle integrity, turbine blade integrity, vibration, etc.

(b) Engine drive system stability/response, including the power turbine rotors, shafting, bearings and supports, reduction and accessory gear trains and rotor brake components.

Interested persons were given an opportunity to participate in the making of this amendment and due consideration has been given to all matters presented. Comments were received and are responded to herein.

Discussion of Comments

Two commenters suggested that the proposed title for the new § 33.96 be changed to read "Engine tests in APU mode" to emphasize that the requirement is to test the complete engine (including the propeller brake), and to emphasize that the tests are not related to propeller parking brakes to prevent windmilling. FAA agrees, and the title is changed accordingly.

Two commenters recommended that the first sentence of proposed § 33.96 be revised to have the rule also apply to engine designs with "provisions" for a propeller brake. Both commenters also recommended insertion of the words "is intended to" before "remain stopped. . . ." One of the two commenters further suggested the last portion of the introductory sentence be changed to allow the propeller brake tests to be performed in conjunction with the applicable endurance test schedule of § 33.87, if system test parameters permit and if found appropriate by the Administrator. FAA does not agree that the rule should address provisional engine designs. The type design of the engine to be certificated must define the configuration to be presented for inspections and tests as expressed in FAR 21, § 21.31 and § 21.33. In this context, there can be no "provisional" engine designs. FAA also does not agree with the suggestion concerning intent of design since the proposed rule expressly speaks to the actual type design submitted for certification. FAA agrees with the suggestion that propeller brake tests may be conducted in conjunction with required tests of § 33.87. Note that this has been typical practice with FAR 33 type certification testing in the past and, where conditions permit, is expected to continue in the future. Accordingly, FAA finds it unnecessary to incorporate this by rulemaking.

One commenter suggested that the first sentence of proposed § 33.96 be revised to refer to § 25.1309 in addition to § 33.87 to assure that the risk of inadvertent propeller brake operation, and the need for fail-safe provisions, are addressed at the aircraft level, as well as at the engine level. FAA agrees with the commenter's objectives. However, the existing airworthiness standards concerning engine installations in FAR Parts 23 and 25, are considered adequate to assure a minimum level of airworthiness for certification of installations of engines designed with propeller brakes for APU mode operations. In this case the engine manufacturer will be required to perform a safety analysis, in accordance with the existing requirements of § 33.75, which addresses APU mode operations. The FAA intends that the results of this analysis will be applied as necessary to the installed engine safety analysis, at the airframe level by the airframe manufacturer, to demonstrate compliance with § 25.1309 or § 23.1309, as appropriate.

A commenter stated that proposed § 33.96(a) is ambiguous in that the objective of the ground locking test can be met by a system which locks the propeller shaft but has no braking function; yet the requirement can be read as applying only to the brake (*i.e.*, it must function without adverse effect on itself during this test). The same commenter stated that proposed § 33.96(b) is also ambiguous, in that it is unclear whether the brake must function without adverse effects while mounted on the engine, or that the engine must suffer no adverse effects when the brake is used. FAA does not agree that the proposed rule is ambiguous. The proposed rule requires that the engine propeller brake must be demonstrated to be satisfactory, and it must not adversely effect the rest of the engine while operating in the APU mode.

Two commenters suggested that the engine operating conditions which apply in § 33.96(b) be revised to read ". . ., as specified by the applicant." FAA agrees with the commenters and the proposed rule is changed accordingly.

A commenter suggested that the proposal for § 33.96(c) is too restrictive in that the actual brake to be used may not be available at the time of the test for designs where provision is made for an optional propeller brake. As discussed earlier, the type design of the engine to be certificated must define the configuration to be presented for inspections and tests. In this context, there can be no provisional engine designs.

A commenter proposed to add a new § 33.96(d) to clearly identify the need to conduct all propeller brake testing on the same engine, but not necessarily the

engine used for the endurance testing. FAA concurs with the commenter and the proposed rule is changed accordingly.

A commenter suggested that propeller brake equipped engines will require additional evaluation to the following sections of FAR 33: §§ 33.14, 33.19, 33.21, 33.63, 33.75 and 33.90. FAA agrees with the concerns expressed by the commenter. However, further rule change is not necessary since the existing rules are sufficiently comprehensive to include engine APU mode design and test operations. The commenter also suggested that design and construction paragraphs 6.13, 6.14, 6.15 and 6.16 of FAA Technical Standard Order (TSO) –C77a (gas turbine auxiliary power units) should be reviewed for applicability to a propulsion engine used as an APU. These paragraphs concern automatic features for temperature control, speed and acceleration control, safety devices, and automatic shutdown features, respectively. The commenter's concern was that if engine operation without a qualified pilot monitoring engine performance is expected, the automatic monitoring devices and shutdown features required for APU's should be incorporated. FAA considers the existing airworthiness rules of FAR 33 to be adequate with regard to basic operations and control of the engine as an APU. If a manufacturer elects to incorporate such features in the engine design, then that configuration will be evaluated against each of the FAR requirements. In any case, appropriate operating limitations, including minimum crew requirements for APU mode operations, will have been established as part of the type certification of the engine and/or the aircraft. The commenter further stated that while disassembly inspection is required for the § 33.96(c) test, it is not clear that such an inspection would be required for the tests listed in §§ 33.96 (a) and (b). FAA agrees with the commenter. To preclude any misunderstanding, that sentence of the proposed rule is restructured as a separate section and the tests required by subsections (a), (b) and (c) are specifically identified therein.

A commenter proposed that the rule define the engine configuration to be used for testing. FAA agrees with the substance of the comment; however, further rule change is unnecessary since § 21.33 and § 21.53 adequately address this concern. The commenter further proposed to require design substantiation submittals in accordance with existing §§ 33.15 through 33.27, 33.62, 33.63, and 33.75. FAA agrees but, as discussed in the previous comments, further rule change is considered unnecessary. The commenter also suggested that FARs 23, 25, 27, and 29 may need review to ensure that adequate indication is provided and that controls are located and configured so as to make inadvertent operation unlikely. FAA agrees with the commenter's objectives, but further rule change is considered unnecessary since the existing certification rules covering turboprop engine installations are considered adequate in this regard.

Regulatory Evaluation

The FAA has determined that the benefits of this rule, while difficult to quantify, outweigh the minimal costs incurred in the certification of a propeller brake. The FAA realizes that the risk of inadvertent operation of the propeller brake or other related malfunction could have catastrophic consequences and, therefore, testing is required to make certain that the propeller brake is safe. Because manufacturers would test the propeller brake even if there were no federal regulation mandating such testing, the cost impact of the regulation will be minimal. The only additional costs would be those attendant to the certification process. Even though manufacturers are likely to test the brake on their own initiative, the regulation is required to ensure that the testing to established minimum standards has, in fact, been uniformly and satisfactorily completed.

The benefits of the regulation are difficult to quantify because industry would likely test the propeller brake even without the regulation. However, the regulation is required to ensure that the propeller brake is safe. Without this assurance the propeller brake's safety is open to question. Safety benefits are derived from the prevention of any possible catastrophic failures.

Other benefits which are difficult to quantify occur because the propeller brake allows the engine to remain on while the propeller is stopped. This will enable the engine to provide auxiliary power to the aircraft without the necessity of a ground power unit, thus allowing more flexibility in operations. It will also save time in turning around an aircraft because a ground auxiliary power unit will not be needed. The overall benefits outweigh the overall costs because the costs are minimal and there are benefits, although unquantifiable, in the prevention of a catastrophe, along with other operational minimal benefits. There were no comments relating to the economic aspects of this rule.

The Regulatory Evaluation which has been placed in the docket contains additional detail relating to costs and benefits, the Trade Impact Assessment and the Final Regulatory Flexibility Determination.

Trade Impact

The FAA has determined that there will be no impact on international trade as a result of the rule. Since certification rules are applicable to both U.S. and foreign manufacturers that sell in the U.S., there will be no competitive advantage to either. Because the test requirements are good commercial practice, foreign manufacturers are expected to certificate to similar standards as exist in the U.S. Therefore, U.S. manufacturers will not be at a disadvantage in foreign markets. There were no comments relating to Trade Impact.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that agencies shall endeavor to fit regulatory requirements to the scale of the entities subject to regulation. The RFA requires agencies to review proposed rules which may have "a significant economic impact on a substantial number of small entities." In the case of aircraft engine manufacturers a small entity is one with 375 or fewer employees. Eight firms in the U.S. manufacture turbine aircraft engines, none of which have fewer than 375 employees. Therefore, the FAA certifies that this rule does not impact a substantial number of small entities. There were no comments relating to the Initial Regulatory Determination.

Conclusion

The FAA has determined that this document involves a regulation which is considered to be not major under Executive Order 12291, or significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979), and certifies that if promulgated, it will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 33

Aircraft engines, Aircraft, Aviation safety.

Adoption of Amendment

Accordingly, the Federal Aviation Administration amends Part 33 of the FAR as follows:

PART 33—AIRWORTHINESS STANDARDS: AIRCRAFT ENGINES

1. The authority citation for Part 33 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421, and 1423; 49 U.S.C. 106(g) (Revised, Pub. L. 97–449, January 12, 1983).

2. By adding new § 33.7(c)(1)(vii) to read as follows:

§ 33.7 Engine ratings and operating limitations.

* * * * *

(c) * * *

(1) * * *

(vii) Auxiliary power unit (APU) mode of operation.

3. By adding new § 33.96 to read as follows:

§ 33.96 Engine tests in auxiliary power unit (APU) mode.

If the engine is designed with a propeller brake which will allow the propeller to be brought to a stop while the gas generator portion of the engine remains in operation, and remain stopped during operation of the engine as an auxiliary power unit ("APU mode"), in addition to the requirements of § 33.87, the applicant must conduct the following tests:

(a) Ground locking: A total of 45 hours with the propeller brake engaged in a manner which clearly demonstrates its ability to function without adverse effects on the complete engine while the engine is operating in the APU mode under the maximum conditions of engine speed, torque, temperature, air bleed, and power extraction as specified by the applicant.

(b) Dynamic braking: A total of 400 application-release cycles of brake engagements must be made in a manner which clearly demonstrates its ability to function without adverse effects on the complete engine under the maximum conditions of engine acceleration/deceleration rate, speed, torque, and temperature as specified by the applicant. The propeller must be stopped prior to brake release.

(c) One hundred engine starts and stops with the propeller brake engaged.

(d) The tests required by paragraphs (a), (b), and (c) of this section must be performed on the same engine, but this engine need not be the same engine used for the tests required by § 33.87.

(e) The tests required by paragraphs (a), (b), and (c) of this section must be followed by engine disassembly to the extent necessary to show compliance with the requirements of § 33.93(a) and § 33.93(b).

Issued in Washington, DC, on March 18, 1986.

Donald D. Engen,

Administrator.

[FR Doc. 86–6409 Filed 3–24–86; 8:45 am]

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federal register

Tuesday
March 25, 1986

Part IV

Department of the Treasury

Internal Revenue Service

26 CFR Parts 301 and 602

Procedure and Administration; Returns Required on Magnetic Media; Final Rule

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Parts 301 and 602

[T.D. 8081]

Procedure and Administration; Returns Required on Magnetic Media

AGENCY: Internal Revenue Service, Treasury.

ACTION: Final regulations.

SUMMARY: This document contains final regulations relating to returns required to be filed on magnetic media. Changes to the applicable law were made by the Tax Equity and Fiscal Responsibility Act of 1982 and the Interest and Dividend Tax Compliance Act of 1983. The regulations apply to persons required to file certain returns (other than individual, estate, and trust income tax returns) and provide guidance with respect to the magnetic media filing requirement.

DATES: The regulations are effective as of March 25, 1986 and generally apply to returns filed after December 31, 1986.

FOR FURTHER INFORMATION CONTACT: C. Scott McLeod of the Legislation and Regulations Division, Office of Chief Counsel, Internal Revenue Service, 1111 Constitution Avenue, NW., Washington, DC 20224, Attention: CC:LR:T, 202–566–3288 (not a toll-free call), if the inquiry relates to other provisions of the regulations.

SUPPLEMENTARY INFORMATION:

Background

On September 18, 1985 (50 FR 37871, Sept. 18, 1985) the **Federal Register** published proposed amendments to the Procedure and Administration Regulations (26 CFR Part 301) and to the Table of OMB Control Numbers under the Paperwork Reduction Act (26 CFR Part 602) relating to section 6011(e) of the Internal Revenue Code of 1954 (50 FR 37871). The amendments were proposed to reflect the addition to the Code of section 6011(e) by section 319 of the Tax Equity and Fiscal Responsibility Act of 1982 (Pub. L. 97–248, 96 Stat. 610) and its amendment by section 109 of the Interest and Dividend Tax Compliance Act of 1983 (Pub. L. 98–67, 97 Stat. 383). Twenty-two written comments responding to the notice of proposed rulemaking were received. On December 18, 1985, the Internal Revenue Service held a public hearing on the proposed amendments. Two individuals provided oral comments at the public hearing. After consideration of all comments received, the proposed amendments are adopted as revised by this Treasury decision.

Summary of Proposed Amendments

Under the proposed amendments, any person that is required to use Form 1042S (Income Subject to Withholding under Chapter 3 of the Internal Revenue Code), 1098 (Mortgage Interest Statement), 5498 (Individual Retirement Arrangement Information), 6248 (Annual Information Return of Windfall Profit Tax), 8027 (Employer's Annual Information Return of Tip Income and Allocated Tips), W–2 (Wage and Tax Statement), W–2G (Statement for Recipients of Certain Gambling Winnings), W–2P (Statement for Recipients of Annuities, Pensions, Retired Pay, or IRA Payments), W–4 (Employee's Withholding Allowance Certificate) or any form in the 1099 series (Information Returns) for the purpose of making a return must provide the information required by such form on magnetic media, unless (1) the person is a low-volume filer with respect to the return or (2) the person is granted a waiver with respect to the return by the Internal Revenue Service. Failure to file a return on magnetic media when required to do so by the regulations would be treated as a failure to file the return and would subject the person to the corresponding penalty.

For calendar years (or annual filing periods) beginning before January 1, 1987, the proposed amendments generally permit the filing of returns on the prescribed paper form for all returns other than those required on Form 1099–DIV, 1099–PATR, 1099–INT, or 1099–OID if fewer than 500 returns were required to be filed on that form for the preceding year (or annual period). For calendar years (or annual filing periods) beginning on or after January 1, 1987, the proposed amendments generally permit the filing of returns on the prescribed paper form for all returns other than those required on Form 1099–DIV, 1099–PATR, 1099–INT, or 1099–OID if fewer than 250 returns were required to be filed on that form for the preceding year (or annual period). The proposed amendments also provide that a person required to file a return on magnetic media may receive a waiver from such requirement in appropriate circumstances upon a showing of hardship.

In addition, under the proposed amendments, persons subject to the magnetic media requirement are required to obtain prior consent to the use of the magnetic medium on which the information is to be submitted. The proposed amendments provide that applications for consent to the use of a magnetic medium and requests for waiver generally must be filed at least 90 days before the filing of the first return for which the consent or waiver is requested. In the case of certain returns (Forms W–2 and W–2P) filed in 1987 and 1988, however, the application for consent or request for waiver is due no later than June 30 of the preceding year.

Public Comments

I. Low-Volume Thresholds.

Several commentators objected to the low-volume thresholds contained in the proposed amendments (500 returns for calendar years (or annual filing periods) beginning before January 1, 1987; 250 returns for calendar years (or annual filing periods) beginning on or after January 1, 1987). Some of these commentators believe that the low-volume thresholds should be increased, while others believe that the implementation of the 250-return threshold should be postponed until a later year. A few commentators believe that the regulations should establish a different threshold for each type of return based on the degree of difficulty in filing on magnetic media for the type of return. In addition, one commentator believes that the low-volume thresholds should apply on an establishment or location basis rather than on a taxpayer basis. Finally, a few commentators believe that the low-volume thresholds should be revised to take into account part-time workers and employee turnover.

The final regulations do not change the low-volume thresholds that were contained in the proposed amendments (except to clarify that a separate threshold applies to each member of an affiliated group of corporations filing a consolidated return) for a number of reasons. First, the purpose of the low-volume thresholds is to exclude from the magnetic media filing requirement those taxpayers that the Internal Revenue Service believes should be excluded because the volume of returns filed does not justify the incremental cost of filing on magnetic media. Taxpayers filing more than 250 returns during any calendar year (or annual filing period) should be able to comply with the magnetic media requirement without incurring unreasonable costs. Many taxpayers filing over 250 returns use computers in other facets of their business. Other taxpayers that do not utilize computers in their business should be able to contract with a computer service bureau to convert the information to magnetic media at a reasonable cost.

Furthermore, taxpayers that are required to file returns in excess of the low-volume thresholds can request a waiver from the magnetic media requirement. As was stated in the preamble to the proposed regulations, it is anticipated that the waiver authority will be exercised so as not to unduly burden taxpayers lacking the necessary data processing facilities and access at a reasonable cost to computer service bureaus.

The final regulations do not adopt a different low-volume threshold for each type of return because the cost of filing on magnetic media should not vary significantly based on the type of return being filed. In addition, the low-volume threshold is not determined on an establishment or location basis because in many cases an exemption would be inappropriate and hardship cases can be dealt with through the waiver process. Finally, the final regulations do not modify the low-volume threshold to take into account part-time employees and employee turnover because the Internal Revenue Service believes that the volume of returns, and not the number of employees, is the best indicator of the incremental cost of filing on magnetic media.

II. Types of Returns Required on Magnetic Media

Several commentators indicated that it is inappropriate and confusing to require magnetic media reporting for information contained on Form W–4 because Form W–4 is not a return (as required by section 6011(e)(1)), but rather is a form that is completed by an employee to enable the employer to withhold an appropriate amount of Federal income tax from the employee's wages. Other commentators argued that magnetic media reporting is inappropriate for information contained on Form 1099–A or Form 1099–R because the transactions that give rise to a return on such forms occur at irregular intervals throughout the year.

The Internal Revenue Service has determined that magnetic media reporting is unnecessary for returns filed on Form W–4, and, thus, the final regulations exclude returns filed on Form W–4 from the list of returns required on magnetic media. The Internal Revenue Service does not believe that the irregularity of a transaction that gives rise to a return will affect a taxpayer's ability to comply with the magnetic media requirement. Taxpayers filing Form 1099–A or Form 1099–R can compile the information required by such forms at the time of the underlying transaction and periodically transcribe the information on magnetic media without a substantial economic burden. For this reason, the final regulations require magnetic media reporting for information contained on Form 1099–A or Form 1099–R.

III. Permissible Media for Filing Returns

Commentators also suggested that the regulations permit magnetic media filing on 5¼ inch personal computer floppy disks. Although the Social Security Administration and the Internal Revenue Service are currently unable to process information submitted on 5¼ inch floppy disks, the Social Security Administration has announced that it will have the capability to process such information for returns filed after December 31, 1986, and the Internal Revenue Service anticipates that it will also have the capability to process such information for certain returns filed after December 31, 1986. Persons that plan to file on 5¼ inch floppy disks should submit a timely consent application that indicates this choice. If the Internal Revenue Service is unable to process such information for returns required to be filed in 1987, a hardship waiver will ordinarily be granted for such year.

IV. Returns of Brokers and Barter Exchanges

One commentator requested clarification with respect to the application of the low-volume thresholds to returns required on Form 1099–B (Proceeds from Broker and Barter Exchange Transactions). The proposed and final regulations do not apply to returns required on Form 1099–B. Consequently, under § 1.6045–1(*l*) of the Income Tax Regulations, all returns required on Form 1099–B must be filed on magnetic media unless a hardship waiver is granted with respect to such return.

V. Coordination of Rules Applicable to Returns Required on Forms W–2 and W–2P With Rules Applicable to Returns Required on Other Forms

One commentator suggested that the approval of magnetic media be performed by a single government agency and that the deadlines for the submission of consent and waiver applications for returns required on Form W–2 and W–2P be the same as the deadlines for other returns (at least 90 days before the filing of the first return for which consent or a waiver is requested). The regulations contain different rules for returns required on Form W–2 and W–2P because these returns are submitted to the Social Security Administration where the information on the returns is processed for use by the Social Security Administration and the Internal Revenue Service. The regulations do not permit approval of a magnetic medium by a single agency because the computer capabilities of the Social Security Administration and the Internal Revenue Service currently differ and are likely to differ in the future. The deadlines for the submission of consent and waiver applications are not uniform for the same reason.

VI. Imposition of Failure To File Penalty for Failure To File on Magnetic Media

The proposed regulations provide that if a person fails to file on magnetic media when required to do so by section 6011(e) and the regulations, such person is deemed to have failed to file the return and is subject to the corresponding penalties for failure to file such return. One commentator requested a transition period before the imposition of penalties for the failure to file on magnetic media. In addition, the commentator suggested that the regulations provide that any reasonable cause or due diligence exception to the penalty for failure to file apply in the case of a failure to file on magnetic media. The Internal Revenue Service believes that it is inappropriate to provide a blanket waiver of the penalty for the failure to file on magnetic media for a transition period. The regulations have been clarified, however, to permit the assertion of a reasonable cause or due diligence exception to the imposition of the penalty if the underlying failure to file penalty permits such as exception.

VII. Effective Date

One commentator requested clarification of the effective date of the regulations. Section 110 of the Interest and Dividend Tax Compliance Act of 1983 provides that in the case of returns required on Form 1099–DIV, 1099–PATR, 1099–INT, or 1099–OID, the magnetic media requirement applies to payments made after December 31, 1983. The final regulations, which follow the proposed regulations, apply to returns filed after December 31, 1986. The final regulations have been clarified, however, to provide that returns required on Form 1099–DIV, 1099–PATR, 1099–INT, or 1099–OID for payments made after December 31, 1983, are subject to the magnetic media requirement even if such returns are filed before January 1, 1987.

VIII. Regulatory Flexibility Analysis

Two commentators believe that the Internal Revenue Service should have undertaken a regulatory flexibility analysis to assess the impact of the

regulation on small businesses and other small entities. Under section 605(b) of title 5 of the United States Code, an initial or final regulatory flexibility analysis is not required if the head of the agency that is proposing a rule certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. In the notice of proposed rulemaking that was published on September 18, 1985 (50 FR 37871), it was certified that the proposed regulations will not have a signficant impact on a substantial number of small entities. This certification was based on a determination that the economic impact of the proposed reporting requirements will be minimal in most cases and, in any event, for returns required on Form 1099–DIV, 1099–PATR, 1099–INT, or 1099–OID, is attributable to requirements directly imposed by the statute. The Internal Revenue Service believes that the certification was proper, and thus, a regulatory flexibility analysis is not required.

IX. Miscellaneous Comments

Finally, a few commentators claimed that the magnetic media requirement was overly burdensome but did not suggest any specific modifications to the proposed amendments, and other commentators suggested changes that are outside the scope of this regulation project.

Executive Order 12291, Regulatory Flexibility Act and Paperwork Reduction Act

The Commissioner of Internal Revenue has determined that this rule is not a major rule as defined in Executive Order 12291 and that a Regulatory Impact Analysis therefore is not required. It is hereby certified that the regulations adopted in this document will not have a significant impact on a substantial number of small entities (see discussion under the Special Analyses heading in the notice of proposed rulemaking; 50 FR 37872). Accordingly, a regulatory flexibility analysis is not required under the Regulatory Flexibility Act (5 U.S.C. chapter 6).

The collection of information requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under section 3504(h) of the Paperwork Reduction Act.

Drafting Information

The principal author of these regulations is C. Scott McLeod of the Legislation and Regulations Division of the Office of Chief Counsel, Internal Revenue Service. However, personnel from other offices of the Internal Revenue Service and Treasury Department participated in developing the regulations, on matters of both substance and style.

FOR ADDITIONAL INFORMATION CONTACT:

1. Magnetic Media Reporting, Internal Revenue Service, National Computer Center, P.O. Box 1359, Martinsburg, West Virginia 25401–1359, 304–263–8700 (not a toll-free call), if the inquiry relates to the waiver procedure or to magnetic media filing for returns required on Form 1098, 1099 series, 5498, 6248, 8027 or W–2G.
2. Magnetic Media Coordinator, Internal Revenue Service, Philadelphia Service Center, P.O. Box 245, Bensalem, Pennsylvania 19020, 215–969–2237 (not a toll-free call), if the inquiry relates to magnetic media filing for returns required on Form 1042S.
3. The following regional magnetic media coordinators of the Social Security Administration, if the inquiry relates to magnetic media filing for returns required on Form W–2 or W–2P:

SSA regional office and for persons residing in

Social Security Administration, J.F. Kennedy Building, Boston, Mass. 02203. Attn: Joanne Shulman, Rm. 1109, 617–223–4375 (not a toll-free call); Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

Social Security Administration, 26 Federal Plaza, New York, New York 10007, Attn: Anne Coe, Rm. 4012, 212–264–0253 (not a toll-free call); New Jersey, New York, Puerto Rico, Virgin Islands

Social Security Administration, P.O. Box 8788, 3535 Market Street, Philadelphia, Penn. 19101, Attn: Frank O'Brien, Rm. 8490, 215–596–0474 (not a toll-free call); Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia

Social Security Administration, P.O. Box 1684, 101 Marietta Tower, Atlanta, Ga. 30301, Attn: Pat McCarron, Suite 1804, 404–221–2587 (not a toll-free call); Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

Social Security Administration, 300 South Wacker Drive, Chicago, Illinois 60606, Attn: Jim Juntunen, 32nd Floor, 312–353–6717 (not a toll-free call); Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

Social Security Administration, 1200 Main Tower, Room 1535, Dallas, Texas 75202, Attn: Pat Insko, 214–767–4311 (not a toll-free call); Arkansas, Louisiana, New Mexico, Oklahoma, Texas

Social Security Administration, 601 East 12th Street, Kansas City, Mo. 64106, Attn: Dale Fick, 4th Floor East, 816–374–2095 (not a toll-free call); Iowa, Kansas, Missouri, Nebraska

Social Security Administration, Federal Office Building, 1961 Stout Street, Denver, Col. 80294, Attn: Rick Schremp, Rm. 1194, 303–837–2364 (not a toll-free call); Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

Social Security Administration, 100 Van Ness Avenue, San Francisco, Cal. 94102, Attn: Bill Brees, Systems Branch, 415–556–4788 (not a toll-free call); American Samoa, Arizona, California, Guam, Hawaii, Nevada

Social Security Administration, 2901 Third Avenue, Seattle, Wash. 98121, Attn: Jan Hotson, M/S 302–206–442–0468 (not a toll-free call); Alaska, Idaho, Oregon, Washington.

List of Subjects

26 CFR Part 301

Administrative practice and procedure, Bankruptcy, Courts, Crime, Employment taxes, Estate taxes, Excise taxes, Gift taxes, Income taxes, Investigations, Law enforcement, Penalties, Pensions, Statistics, Taxes, Disclosure of information, Filing requirements.

26 CFR Part 602

Reporting and recordkeeping requirements.

Adoption of Amendments to the Regulations

Accordingly, 26 CFR Parts 301 and 602 are amended as follows:

PART 301—[AMENDED]

Paragraph 1. The authority for Part 301 is amended by adding the following authority citation:

Authority: 26 U.S.C. 7805. * * * Section 301.6011–2 also issued under 26 U.S.C. 6011(e).

Par. 2. New § 301.6011–2 is added immediately after § 301.6011–1 to read as follows:

§ 301.6011–2 Required use of magnetic media.

(a) *Meaning of terms.* The following definitions apply for purposes of this section:

(1) *Magnetic media.* The term "magnetic media" means any magnetic media permitted under applicable regulations, revenue procedures, or, in the case of returns filed with the Social Security Administration, Social Security Administration publications. These generally include magnetic tape, diskette, cassette, and mini-disk, as well as other media specifically permitted under the applicable regulations or procedures. Use of diskette and cassette may be subject to certain limitations or special rules in the case of returns required on Form W–2 or W–2P.

(2) *Machine-readable paper form.* The term "machine-readable paper form" means—

(i) Optical-scan paper form; or

(ii) Any other machine-readable paper form permitted under applicable regulations, revenue procedures, or Social Security Administration publications.

(3) *Person.* The term "person" includes any person that is required to file a return that is described in paragraph (b) of this section. Thus, the term "person" includes the United States, a State, the District of Columbia, a foreign government, a political subdivision of a State or of a foreign government, or an international organization. In addition, in the case of an affiliated group of corporations filing a consolidated return, each member of the affiliated group is a separate person.

(b) *Returns required on magnetic media.* (1) If the use of Form 1042S, 1098, 1099 series, 5498, 6248, 8027, W–2G, or other form treated as a form specified in this paragraph (b)(1) is required by the applicable regulations or revenue procedures for the purpose of making a return, the information required by such form shall, except as otherwise provided in paragraph (c) of this section, be submitted on magnetic media. Returns on magnetic media shall be made in accordance with applicable revenue procedures. Pursuant to these procedures, the consent of the Commissioner of Internal Revenue (or other authorized officer or employee of the Internal Revenue Service) to a magnetic medium shall be obtained prior to submitting a return on such magnetic medium. An application for such consent shall be in writing and must be filed at least 90 days before the filing of the first return for which consent is requested.

(2) If the use of Form W–2, W–2P, or other form treated as a form specified in this paragraph (b)(2) is required by the regulations or revenue procedures for the purpose of making a return (not including the copy of Form W–2 or W–2P that is required to be attached to an Individual Income Tax Return), the information required by such form shall, except as otherwise provided in paragraph (c) of this section, be submitted on magnetic media. Returns on magnetic media shall be made in accordance with applicable Social Security Administration procedures. Thus, the consent of the Secretary of Health and Human Services (or other authorized officer or employee of the Department of Health and Human Services) to a magnetic medium shall be obtained prior to submitting a return on such magnetic medium. An application for such consent shall be in writing and must be filed—

(i) On or before June 30, 1986, in the case of returns filed in 1987;

(ii) On or before June 30, 1987, in the case of returns filed in 1988; and

(iii) At least 90 days before the filing of the first return for which consent is requested in all other cases.

(3) The Commissioner may prescribe by revenue procedure that additional forms are treated, for purposes of this section, as forms specified in paragraph (b)(1) or (b)(2) of this section.

(c) *Exceptions*—(1) *Low-volume filers*—(i) *In general.* A person required to make returns on a particular type of form specified in paragraph (b) of this section (other than Form 1099–DIV, 1099–PATR, 1099–INT, or 1099–OID) may make such returns on the prescribed paper form for a calendar year or other applicable annual period (whether such returns are filed during the calendar year or annual period or during the subsequent calendar year or annual period) if—

(A) In the case of a calendar year or annual period beginning before January 1, 1987—

(*1*) On the first day of such calendar year or annual period the person reasonably expects to file fewer than 500 returns on such form for the calendar year or annual period; and

(*2*) The person was not required to file 500 or more returns on such form for the preceding calendar year or annual period; or

(B) In the case of a calendar year or annual period beginning on or after January 1, 1987—

(*1*) On the first day of such calendar year or annual period the person reasonably expects to file fewer than 250 returns on such form for the calendar year or annual period; and

(*2*) The person was not required to file 250 or more returns on such form for the preceding calendar year or annual period.

Alternatively, such persons may make returns on magnetic media in accordance with paragraph (b) of this section.

(ii) *Machine-readable forms.* Returns made on a paper form under this paragraph (c)(1) shall be machine-readable if applicable revenue procedures provide for a machine-readable paper form.

(iii) *Form 1099 series.* Each form within the Form 1099 series is considered a separate type of form for purposes of this paragraph (c)(1). Thus, for example, in the case of a calendar year beginning on or after January 1, 1987, if on the first day of such calendar year a person reasonably expects to file 200 returns on Form 1099–A and 150 returns on Form 1099–MISC and for the preceding calendar year the person was required to file 200 returns on Form 1099–A and 150 returns on Form 1099–MISC, the person may make such returns on the prescribed paper form for such calendar year.

(2) *Special rule for Form 1099–DIV, 1099–PATR, 1099–INT, 1099–OID*—(i) *50 or fewer returns.* A person required to make returns on Form 1099–DIV, 1099–PATR, 1099–INT, or 1099–OID may make such returns on a machine-readable paper form for a calendar year if—

(A) On the first day of such calendar year the person reasonably expects to file 50 or fewer returns on such forms for the calendar year; and

(B) The person was not required to file more than 50 returns on such forms for the preceding calendar year.

Alternatively, such persons may make returns on magnetic media in accordance with paragraph (b) of this section

(ii) *Aggregation of returns.* For purposes of determining the number of returns that a person was required to file or reasonably expects to file on Form 1099–DIV, 1099–PATR, 1099–INT, or 1099–OID, all such returns shall be aggregated. Thus, for example, if a person filed 30 returns on Form 1099–INT and 30 returns on Form 1099–DIV for a calendar year, or reasonably expects to do so for the succeeding calendar year, all returns made by such person on Form 1099–DIV, 1099–PATR, 1099–INT and 1099–OID for the succeeding calendar year must be on magnetic media.

(3) *Provided by regulations*—(i) *In general.* This section does not apply to a return if the regulations relating to such return require reporting on magnetic media.

(ii) *Example.* The following example illustrates the application of the rule in paragraph (c)(3)(i) of this section:

Example. Section 1.6045–1(*f*), relating to returns of information of brokers and barter exchanges, requires the use of magnetic media as the method of reporting. Thus, this section does not apply to returns required to be filed under section 6045.

(4) *Waiver.* (i) The Commissioner may waive the requirements of this section if hardship is shown in an application filed in accordance with this paragraph (c)(4)(i). Such waiver shall specify the type of form and period to which it applies and shall be subject to such terms and conditions regarding the method of reporting as may be prescribed by the Commissioner. In determining whether hardship has been shown, the principal factor to be taken into account will be the amount, if any,

by which the cost of filing returns in accordance with this section exceeds the cost of filing the returns on other media. A request for waiver shall be in writing and must be filed—

(A) On or before June 30, 1986, in the case of returns on Form W–2 or W–2P filed in 1987;

(B) On or before June 30, 1987, in the case of returns on Form W–2 or W–2P filed in 1988; and

(C) At least 90 days before the filing of the first return for which a waiver is requested in all other cases.

(ii) The Commissioner may by revenue procedure prescribe rules that supplement the provisions of paragraph (c)(4)(i) of this section.

(d) *Paper form returns.* Returns submitted on paper forms (whether or not machine-readable) permitted under paragraph (c) of this section shall be made in accordance with applicable revenue or Social Security Administration procedures.

(e) *Applicability of current procedures.* Until procedures are prescribed which further implement the mandatory filing on magnetic media provided by this section, a return to which this section applies shall be made in the manner and shall be subject to the requirements and conditions (including the requirement of applying for consent to the magnetic medium) prescribed in the regulations, revenue procedures and Social Security Administration publications relating to the filing of such return on magnetic media. In addition, consent to the use of a magnetic medium obtained in accordance with such regulations, revenue procedures and Social Security Administration publications (regardless of when obtained) will be considered consent to the use of such medium for purposes of paragraph (b) of this section.

(f) *Failure to file.* If a person fails to file a return on magnetic media when required to do so by section 6011(e) and this section, such person is deemed to have failed to file the return. See sections 6652 and 6693 for penalties for failure to file certain returns.

(g) *Effective date.* (1) Except as otherwise provided in paragraph (g)(2) of this section, this section applies to returns filed after December 31, 1986.

(2) Returns required on Form 1099–DIV, 1099–PATR, 1099–INT, or 1099–OID for payments made after December 31, 1983, must be filed on magnetic media except as otherwise provided in paragraph (c) of this section.

PART 602—[AMENDED]

Par. 3. The authority citation for Part 602 continues to read as follows:

Authority: 26 U.S.C. 7805.

§ 602.101 [Amended]

Par. 4. Section 602.101(c) is amended by inserting in the appropriate place in the table "§ 301.6011–2 . . . [1545–0387]".

Roscoe L. Egger, Jr.,

Commissioner of Internal Revenue.

Approved: March 5, 1986.

J. Roger Mentz,

Acting Assistant Secretary of the Treasury.

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